

S-1127

Total Pages : 3

Roll No.

CHE-554

Drugs and Pharmaceuticals

M.Sc. Chemistry (MSCCH)

2nd Year Examination, 2022 (Dec.)

Time : 2 Hours]

Max. Marks : 70

Note : This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION-A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. What is an agonist drug? Discuss briefly about the general principle involved in the design of agonists.

2. Define the linker. Discuss the different type linker used in combinatorial synthesis.
3. (a) Give an account of the discovery of penicillin. Also give the mechanism of the functioning of penicillin drug.
(b) What is an Antibiotic? Discuss the synthesis of antibiotic having beta - Lactam ring in its structure.
4. What is QSAR? Discuss the conditions for applicability of QSAR. Explain the Hansen method of QSAR studies.
5. (a) Write the synthesis of the sulfomethoxazole drug and their application and side effects.
(b) Write a short note on classification of nervous system.

SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. What is the importance of carbonic anhydrase? Explain the carbonic anhydrase inhibition.
2. Define genetic engineering process. Explain genetic engineering process.

3. Define cholinergic agonist. Write the drugs acting as cholinergic agonists.
 4. Write short note on any *two* :
 - (a) Sodium channels.
 - (b) Potassium channels.
 - (c) Calcium channels.
 5. Explain the importance of the X-ray crystallographic studies in drug design and development
 6. What are DNA-Topoisomerase inhibitors? Explain its mechanism.
 7. Discuss the salient feature of the prodrug approach. Enumerate the fundamental concepts of prodrug with suitable examples.
 8.
 - (a) What is chiral drugs? Explain its importance.
 - (b) Formulate the synthesis of (S)-ibuprofen.
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